Montana Technical Assistance Cooperative Agreement

Support Agency Assistance Application

FFY 2016

Bulk Accounts Grant Application Narrative

October 1, 2015 – September 30, 2016

Montana Department of Environmental Quality

Remediation Division

Helena Montana

For the

U.S. Environmental Protection Agency

Region VIII

Denver, Colorado

[DATE \@ "M/d/yyyy"]

Contents

INTRODUCTION

This Multi-Site Technical Assistance Cooperative Agreement (TACA) application requests funding for the Montana Department of Environmental Quality (DEQ) Superfund Program to provide technical assistance for state participation in the federal Superfund Program authorized in the 1986 Superfund Amendment and Reauthorization Act. For SFY 2016, the agencies agreed to request a separate grant for Technical Assistance for Bulk account sites. This TACA application will support DEQ's site specific activities for Environmental Protection Agency (EPA) lead NPL sites in Montana from October 1, 2015 through September 30, 2016.

SUPPORT AGENCY ACTIVITIES

The Remediation Division manages DEQ's Superfund mission through the Federal Superfund Bureau and the Hazardous Waste Site Cleanup Bureau. Remediation Division staff from both bureaus work on federal Superfund cleanup activities under the CORE cooperative agreement, the Multi Site Cooperative Agreements (MSCA), and Technical Assistance Cooperative Agreements (TACA).

The intent of DEQ in this support agency role is to enhance progress at all EPA Lead sites by providing technical, legal, and managerial resources to the EPA, as well as articulating any issues of the State and US Forest Service concern, and promoting state and local involvement in the site remediation process.

To facilitate fund management DEQ and EPA have agreed to provide specific TACA for the Carpenter Snow Creek Site and the Butte Mine flooding site. Remaining EPA lead sites technical assistance requests are included in within this Cooperative Agreement request.

STATEMENT OF WORK TO PROVIDE EPA TECHNICAL ASSISTANCE

DEQ, under this TACA, will provide intergovernmental agency agreement coordination and contracted services management as needed by the agencies. Site-specific narratives describe commitments for each site.

Intergovernmental Agency Agreement Coordination/Contracted Services Management

Commitment 1 - Define Technical Expertise Requirements

Outputs: Identify governmental, nonprofit, and private consultants with expertise in several areas including geochemistry, hydrogeology, statistics, quality assurance, GIS, soils, agriculture, fisheries, laboratory capabilities, and legal assistance. Conduct discussions and negotiations with the EPA to define the scope of technical work and acceptable costs.

Commitment 2 - Prepare and Administer Intergovernmental Agency Agreements

Outputs: Enter into agreements with governmental, nonprofit, and private consultants for approved assignments. Monitor commitment order progress and fiscal accountability.

Commitment 3 - Review and Comment on Documents

Outputs: Provide review of deliverables obtained through intergovernmental agency agreements to ensure quality and acceptability of work effort.

Commitment 4 - Procure and Manage Contractor Services

Outputs: Procure and manage agreements with governmental, nonprofit, and private consultants as needed to fulfill state commitments and to enhance progress on project activities. Examples of services include: technical assistance for project oversight, limited sample collection and analysis activities, court reporting for public hearings, paralegal assistance for cost recovery or administrative record preparation, office clerical help to photocopy or microfiche documents for EPA use, and financial accountant/auditor for contract compliance evaluations.

Outcome: Enable state ability to enter into and manage IAGs and contracted services to support superfund RI/FS and RD/RA activities.

SITE-SPECIFIC WORK PLANS FOR THIS TECHNICAL ASSISTANCE COOPERATIVE AGREEMENT INCLUDE:

ANACONDA ALUMINUM COMPANY COLUMBIA FALLS ALUMINUM REDUCTION PLANT

The Anaconda Aluminum Company Columbia Falls Reduction Plant, aka the Columbia Falls Aluminum Facility (CFAC) has been proposed for listing on the National Priorities List due to the presence of contaminants associated with past operation in soils, groundwater, and onsite disposal facilities. During 2015 and 2016 the facility may be added to the NPL and it is anticipated that initial remedial investigation tasks, including sampling and analysis will commence.

Technical Assistance

DEQ will not be requesting specific technical assistance funds for the proposed FFY-2016 work scope.

BARKER HUGHESVILLE REMEDIAL ACTION

The Barker Hughesville Mining District Superfund Site covers about 15 square miles in west central Montana. The site is south of Great Falls and approximately 12 miles east of the town of Monarch. Although mostly in Cascade County, a portion of the site is in Judith Basin County. The site contains approximately 46 abandoned mines strewn with waste rock dumps, tailings and seeping mine openings. The abandoned mines and associated contamination are dispersed throughout a 6,000-acre watershed. Most of the mine sites are in the Galena Creek drainage, near the historic town sites. Some of the abandoned mines are on privately owned land and others are on public lands administered by the US Forest Service (USFS).

An EPA-DEQ site-wide Remedial Investigation (RI) report is scheduled to be completed in early 2015 and is based upon information gathered between 2009 and 2014, including historic data.

EPA, in consultation with DEQ and the USFS, began a Feasibility Study (FS) of the Galena Creek portion of the site to evaluate the most appropriate cleanup methods and is expected to be finalized in 2015. This will be followed by a proposed plan and a Record of Decision (ROD) for cleanup of Galena Creek.

Technical Assistance

DEQ will not be requesting specific technical assistance funds for the proposed FFY-2016 work scope.

BASIN WATERSHED OPERABLE UNIT

EPA listed the Basin Mining Area to the Superfund National Priorities List (NPL) on October 22, 1999, due to mining-waste problems in the watershed and mining waste in the Town of Basin. The mining area includes the watersheds of Basin and Cataract Creeks and portions of the Boulder River below the confluence with these heavily impacted streams. In 2015 Records of Decision were signed for the Bullion and Crystal Mines. Remedial design and studies are ongoing to define how the remedial action specified in the Records of Decision will be implemented. There is continuing need to review AMD source control options, and to review remedial design with emphasis on site access and long term run-on/run-off control. We also anticipate that limited monitoring of the quantity and quality adit discharge at Bullion and Crystal will be necessary in conjunction with planned ground water monitoring to support remedial design and remedial operation. The impacts of the Crystal and Bullion remedial actions on metal loading in Basin Creek and Cataract Creek need to be measured at least twice per year to assist in defining what additional remedial efforts are required to meet TMDLs in Basin Creek and Cataract Creek.

Technical Assistance

DEQ will continue to contract with the USGS for surface water monitoring. The USGS surface water sampling, over the last 14-15 years in the Basin/Cataract /boulder watershed, has established the trend basis for evaluating the impact of on-going and proposed remedial actions on reducing the metal loading in the watershed. The Basin watershed project is focused on AMD control and treatment; regular (twice per year) surface water quality data is critical to measuring progress in reducing the metal loading in the watershed. DEQ also anticipates requiring technical assistance to review the proposed passive treatment system approach for both the Basin and Crystal Mines.

Continue AMD source control option evaluation. Review remedial design with emphasis on site access and long term run-on/run-off control. Adit discharge and ground water monitoring at Bullion and Crystal. Use MBMG and/or other qualified technical expertise.

The DEQ funding request for SFY 2016 is $20,800.00.

CARPENTER-SNOW CREEK MINING DISTRICT

The Carpenter Snow Creek Mining District Site (CSCMD) is located near and including the town of Neihart, MT in Cascade County, was added to the National Priorities List in Sept. 2001. EPA is the lead agency for the CSCMD site and DEQ is the supporting agency providing technical assistance. The CSCMD site contains 96 abandoned mines, 26 of which have been identified as sources of arsenic, lead, cadmium, and other heavy metal contaminants that pose a risk to human health and the environment. Surface water and soils have been impacted by historical mining activities. A Record of Decision for the Town of Neihart OU-1 was issues by EPA with concurrence by DEQ on May 19, 2009. EPA and DEQ are currently working on RI/FS activities for the remainder of the site.

Technical Assistance

DEQ will not be requesting Technical assistance for the Carpenter Snow Creek Mining District within this request but has made a separate request due to the magnitude of the proposed work-scope.

FLAT CREEK/IRON MOUNTAIN MINE

The Flat Creek/Iron Mountain Mine site is located near Superior, MT. The site was divided into three operable units (OU); OU-1 Tow n of Superior, OU-2 Flat Creek Watershed, and OU-3 wood Gulch Mine Waste repository. Work has been completed with OU1 and is ongoing in OUs 2 and 3. Future works scope includes site characterization, potential removal actions, and decision making.

Technical Assistance

DEQ will not be requesting specific technical assistance funds for the proposed FFY-2016 work scope.

MOUAT INDUSTRIES

The Mouat Industries site is located south of Columbus, Montana. The site lies in the flood-plain of the Yellowstone River, less than 0.6 miles north of the present river channel. Mouat Industries processed chromite ore mined from the Stillwater Mining Complex in south-central Montana into high-grade sodium dichromate, which was sold as a corrosion inhibitor. The process subsequently generated sodium sulfate process wastes containing sodium chromate and sodium dichromate. These hexavalent chromium-containing compounds leached from the sodium sulfate waste piles into underlying soils and eventually into the site groundwater. The chromium processing plant was built and operated from 1957 to 1962. In 1996, EPA issued a Unilateral Administrative Order (UAO) to all PRPs notified in the 1991 AOC. The UAO required implementation of a Non-Time Critical Removal Action. Monitoring has shown that natural attenuation of chromium is occurring with total chromium concentrations below both the MCL and WQB-7 standard beginning December 1999. After three consecutive years of meeting the groundwater performance standard established in the 1996 action memorandum, the October 2002 sampling event finalized

the demonstration that the MCL and the WQB-7 standards for chromium in groundwater had not been exceeded for a period of three consecutive years.

In September 2007, the Montana Bureau of Mines and Geology (MBMG) under a Montana Department of Environmental Quality (DEQ) contract conducted a study to evaluate the potential for chromium VI to leach from soils treated under the 1991 Action Memorandum and UAO. The Site Evaluation Report concluded that leaching of chromium VI from the treated blocks to groundwater occurs in the source area but is unlikely to generate a groundwater plume exceeding the cleanup level of 100 µg/L at a downgradient location.

The EPA conducted the first Five-Year Review of the response actions implemented previously at the Mouat Site between October 2007 and March 2008 (EPA 2008a). The purpose of the Five-Year Review was to determine whether the Mouat Site response actions were protective of human health and the environment. The triggering action for this review was the completion of the Preliminary Closeout Report in September 1996 (EPA 1996b). Response actions conducted at the Mouat Site resulted in waste being left in place. Response actions were conducted as removal actions rather than remedial actions. Therefore, a Five-Year Review is not required but was conducted as a matter of EPA policy, because the removal actions left hazardous substances, pollutants, or contaminants at the Mouat Site above levels that allow for unlimited use and unrestricted exposure. No major concerns were identified during this review. However, it did recommend amending the 1996 Action Memorandum, clarifying some of the Institutional Controls, and proceeding with closure of the Mouat Site.

EPA issued an Action Memorandum Amendment in 2008 (EPA 2008b) as a result of the Five-Year Review. The Action Memorandum Amendment had four (4) purposes;

1. Clarify the Points of Compliance for groundwater at the Mouat Site.
2. Ensure that the restriction on groundwater use in the Block Placement Area will be maintained as long as institutional controls are necessary. (This has been done through a modification in the Town of Columbus' Superfund Overlay District Ordinance.)
3. Clarify the 30-year groundwater monitoring requirement identified in the June 21, 1996 Action Memorandum (EPA 1996a).
4. Directing DEQ and the EPA to prepare a Post Removal Site Control Plan pursuant to Section 300.415(l)(3) of the NCP.

The EPA published a direct final Notice of Partial Deletion of the surface and subsurface soil components of the Mouat Site from the National Priorities List (NPL) (EPA 2009b) with the concurrence of the State of Montana, through the DEQ. The EPA determined that all appropriate response actions at the Mouat Site under CERCLA, other than five-year reviews and operation and maintenance, have been completed. However, this partial deletion does not preclude future actions under Superfund. This partial deletion only pertains to the surface and subsurface soils components of the Mouat Site. The groundwater component remains on the NPL and was not considered for deletion as part of this action. The direct final partial deletion became effective May 26, 2009.

Annual monitoring of groundwater wells has been ongoing since 2008 and continues today. The groundwater results are compared to "action levels" and appropriate sampling schedules are applied, as detailed in the Post Removal Site Control Plan (EPA/DEQ 2013), to ensure continued protection of human health.

The EPA conducted the second Five-Year Review between April 2012 and March 2013 (EPA 2013). The triggering action for this review was the completion of the first Five-Year Review in March 2008 (EPA 2008a). Again, no major concerns were identified during this review. However, to ensure long-term protectiveness, the Five-Year Review included recommendations to update the Post Removal Site Control Plan and increase coordination with the Town to ensure the enforcement of Institutional Controls. The EPA and DEQ updated the Post Removal Site Control Plan (EPA/DEQ 2013) in 2013 and have continued routine communication with the Town regarding Institutional Controls and land-use.

Technical Assistance

DEQ maintains a task order with MBMG to conduct the annual groundwater monitoring required in the Post Removal Site Control Plan.

The DEQ funding request for FFY-2016 is $26,000.00.

SMURFIT-STONE MILL (FRENCHTOWN MILL)

The Smurfit-Stone Mill was a large integrated pulp and paper mill that operated from late 1957 through early 2010. The former mill is located on the eastern bank of the Clark Fork River, 11 miles northwest of the city of Missoula, in Missoula County, Montana. It covers approximately 3,200 acres. The mill is located approximately three miles south of the town of Frenchtown and has often been referred to as the Frenchtown Mill. EPA has conducted a Preliminary Assessment/Site Inspection at the Smurfit-Stone Mill that identified environmental contamination at the site. As a result of this limited investigation, EPA is pursuing a thorough environmental investigation of the site, known as a Remedial Investigation, to determine the nature and extent of contamination. It is anticipated that initial studies, sampling and analysis, and drafting of the remedial investigation may commence following signature of the AOC.

Technical Assistance

DEQ will not be requesting specific technical assistance funds for the proposed FFY-2016 work scope.

UPPER TEN MILE MINING AREA

The Upper Tenmile Creek Mining Area site is located in the Rimini Mining District, southwest of Helena, Montana. It consists of numerous abandoned and inactive hard-rock mine sites that produced gold, lead, zinc and copper. Mining began in the district before 1870 and continued

through the 1920s. Little mining has been performed there since the early 1930s. The site includes the drainage basin of Tenmile Creek upstream of the Helena water treatment plant and includes tributaries that supply water to the plant's five intake pipelines. EPA identified 150 individual mine sites within the watershed boundary, of which 70 have been prioritized for cleanup. Many of these mine features are above the five City of Helena drinking water intakes, which supply about 50 percent of the city's water.

To date, EPA has been unable to identify a potentially responsible party, so the cleanup on private land is being 90 percent paid for with federal funds and 10 percent with state funds. Cooperating agencies have combined resources to expedite a watershed cleanup. The U.S. Forest Service has taken the lead role in cleaning up wastes on federal property within the Superfund site boundary (Beatrice, Justice and Armstrong mines). Where individual mines involve both federal and private lands (Upper Valley Forge mine), cleanup expenses are shared by EPA and the Forest Service, with the State of Montana paying 10 percent. EPA and the Forest Service also share construction and maintenance costs of a joint mine-waste repository.

Removal/reclamation actions have been completed at the mines which had the greatest negative impact on the watershed. Private property and public property, which had been impacted by mining wastes, have been remediated. Current design and remedial efforts are focused on those sites that contribute metal loading to the 10Mile watershed with emphasis on surface water control and ground water control to reduce the amount of AMD which requires treatment. Focus is also on the design of passive AMD treatment systems that are compatible with the specific site access.

Technical Assistance

DEQ will continue to contract with the USGS for surface water monitoring .The USGS surface water sampling, over the last 14-15 years in the 10Mile watershed, has established the basis for evaluating the impact of the on-going remedial actions on reducing the metal loading to 10Mile Creek. The 10Mile project is currently focused on AMD control and treatment; continuous (twice per year) surface water quality data is critical to measuring progress on reducing metal loading. USGS surface water and ground water sampling and quality trending for the 10Mile watershed and the Basin Mine/Luttrell repository in order to track TMDL progress for ongoing Superfund project. This assistance is currently covered through September 30, 2015.

DEQ also anticipates requiring technical assistance to review the proposed passive treatment systems for National Extension, Susie, LeeMt, Red Water, Little Lily, Pauper's pit, Stanton, Evergreen#3. The design and operation of the treatment systems at each of these sites will be influenced by AMD source control, site access, local conditions, and water chemistry.

Additional data from to support evaluation of remedial performance should be conducted to expand our knowledge and understanding of impacts by future remedial actions. Proposed work scope would include, based upon the return of trout population in the section near Rimini and downstream:

- Benthic macroinvertebrate population and relative abundance (10 sites)
- Fish population and relative abundance (10 sites)
- Fish movement/habitat with PIT tags (throughout drainage; 4 permanent stations)
- Water quantity monitoring (install pressure transducer and monitoring flow in mainstem and tributary diversions)
- Water quality monitoring (4 hydrolabs)
- Caged-fish study*

The initial study (1997-2001) included a caged fish study to determine lethal thresholds of zinc and cadmium to rainbow and brook trout in different sections of the Creek. During the initial study, survival of fish was very limited in Tenmile Creek sections from Rimini to below Minnehaha. Our 2012 and 2013 sampling shows fish populations have increased considerably, so rather than repeat this initial study design, we propose testing to see if fish upstream of the mainstem diversion and un-impacted tributaries have the same survival rates are resident fish living in the sections below town.

The DEQ funding request for FFY 2016 contracted services is $109,200.00.

PRELIMINARY ASSESSMENT/SITE INSPECTION

DEQ administered a state-lead preliminary assessment/site investigation (PA/SI) program and assisted EPA on EPA-lead site assessment activities before sites are proposed or listed on the NPL.

Technical Assistance

The Flint Creek Watershed (FCW) is located in Granite County, Montana and covers approximately 500 miles (Seagull 2014). The watershed extends from Georgetown Lake and bisects two large agricultural valleys, the Philipsburg Valley and the Drummond Valley, before draining into the Clark Fork River. Land within the watershed is primarily private and administered by United States Forest Service (Beaverhead-Deerlodge National Forest), with a small amount of land managed by the Bureau of Land Management and the State of Montana. The FCW is known for historic mining and milling activities. Located within the watershed are two significant streams; Douglas Creek and Fred Burr Creek. Both streams discharge into Flint Creek and have been impacted by historical mining. The Granite Headwaters Watershed Group, a local citizen coalition, and the Granite Conservation District (CD) have partnered with state and federal agencies to form a Technical Advisory Committee to develop a comprehensive plan for remediating metal contamination in the FCW. The focus, to date, has been on sampling activities within Fred Burr Creek utilizing Department of Natural Resources and Conservation (DNRC) grant funds.

DEQ is requesting technical assistance to create a comprehensive plan for remediating contamination in Douglas Creek, to reduce metal loading into Flint Creek. Task to be accomplished begin with coordination with local, state, and federal agencies to define goals and develop a scope of work to address those goals, including the Watershed Group to:

1. Review existing analytical data in the FCW.

2. Complete an Expanded Site Inspection for Douglas Creek, including:
    a. data gap analysis for Douglas Creek and
    b. develop and Sampling and Analysis Plan (SAP) to address the data gaps.
    c. Conduct the field sampling.
3. Interpret the sampling results and prioritize reclamation projects.
    a. An Analytical Results Report and Prioritization Plan will be developed and will identify target or sources areas for remediation.
    b. The Prioritization Plan will include cost estimates for the identified projects. This Plan will be utilized in the application of Resource Development Grant (RDG) funds from the DNRC.

DEQ is also requesting additional funding to conduct Preliminary Assessment/Site Inspection (PA/SI) activities as needed and technical assistance to support the work effort. Technical assistance may be needed in SFY 2016 for on-going projects such as Helena Solvent Site, Helena; Eureka Public Water Supply, Eureka; Roxy Cleaners, Havre; Whitefish Solvent Site, Whitefish; and other unknown sites that could be identified during the upcoming year. There is a need to increase DEQ resources regarding PA/SI related projects and provide time to review and coordinate the new activities with EPA Region 8.

The total DEQ funding request for SFY 2016 is $67,600.00.

GENERAL FUNDING REQUEST

DEQ is committed to assisting and consulting with EPA to complete projects in as timely a manner as possible on this "bulk" sites. In order to maintain a responsive posture and the ability to respond to emerging issues DEQ is requesting a limited amount non-specific site funding that could be applied to any of the bulk sites to respond to an emerging issue, to facilitate the completion of work scope, or provide the agency team necessary initial resources to facilitate the timely execution on emergent project scope that may not be identifiable months in advance of investigative and remedial activities.

Technical Assistance

The DEQ funding request for SFY 2016 is $41,600.00.